UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,337	08/23/2001	Shijun Sun	8371-141	1312

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EXAMINER
LEE, RICHARD J

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,2,4-6,8 and 9* is/are allowed.

6)☒ Claim(s) *3,7 and 10-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   The request filed on July 12, 2005 for a Request for Continued Examination (RCE) is

acceptable and a RCE has been established. An action on the RCE follows.

2.   Applicants' arguments from the amendment filed July 12, 2005 have been noted and

considered, but are deemed moot in view of the following grounds of rejections.

3.   Upon further review and consideration, the following grounds of rejection are deemed

proper. The Examiner apologizes for any inconvenience that this may have caused for the

applicants.

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

5.   Claims 10-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the enablement requirement. The claim(s) contains subject matter which was not described in

the specification in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention.

Claims 10 and 16, respectively recite a single means claim, and a single means claim

which covers every conceivable means for achieving the stated purpose was held nonenabling

for the scope of the claim because the specification disclosed at most only those means known to

the inventor (see in re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983), and

MPEP 2164.08(a)). Though claim 10 recites a decoder and a processor, the decoder is nothing

else or nothing more than the processor (i.e., the decoder and processor are the same and thus

considered a single means claim). Similarly, claim 16 recites an encoder and a processor, but the

encoder is nothing else or nothing more than the processor (i.e., the encoder and the processor

are the same and thus considered a single means claim). Since dependent claims 11-15 and 17-

23 depend directly or indirectly from respective independent claims 10 and 16, claims 10-23 as a

whole are therefore rejected for the same reasons as set forth in the above.

6.   Claims 16-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

For examples:

        (1) claim 16, lines 7-8, the phrase "should be" does not show positive recitation and as

such renders the claim vague and indefinite;

        (2) claim 17, lines 1-2, claim 18, line 3, claim 19, lines 2-3, claim 20, lines 2-3, "the local

motion estimation parameters" shows no clear antecedent basis, respectively; and

        (3) claim 24, lines 1-2, "the local motion parameters" shows no clear antecedent basis.

7.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

8.   Claim 7 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-

statutory subject matter.

        Claim 7 calls for a method for coding or decoding an image as recited in the preamble,

but the body of the claim recites a plurality of steps pertaining to the manipulation of data

without a practical application and as such does not fall within the statutory classes set forth in

35 U.S.C. 101.

9.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

        Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10.   Claim 3 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 10 of copending Application No. 10/094,043. Although the conflicting claims are not identical, they are not patentably distinct from each other because application claim 3 is broader than claims 1-3 and 10 of '043.

        This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12.   Claims 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki of record (6,256,343).

        Suzuki discloses a method and apparatus for image coding as shown in Figures 1, 2, and 4-6, and the substantially the same encoding image frames wherein a common set of global

motion estimation parameters are included in the encoded image frames for identified

macroblocks (i.e., as provided by 30-1, 30-2 of Figure 6, see column 5, lines 13-27, column 10,

lines 14-31) and no local motion vectors are included in the encoded image frames for the

identified macroblocks (i.e., global motion vector mv2 of Figures 4 and 6 as provided to the

coder 8 of Figure 4, represents the respective encoded image frame for the identified

macroblocks, see column 9, lines 47-49, column 10, lines 14-31), deriving local motion vectors

for the identified individual macroblocks from the global motion estimation parameters

independently of types of local motion vectors or global motion vectors used for other adjacent

macroblocks in the encoded image frames (i.e., the local motion vector derived at the output of

30-3 of Figure 6 for each individual macroblock from the global motion estimation parameters

input to 30-3 from global motion compensation device 30-2, and since a local motion vector is

derived for each respective macroblock, the local motion vectors for the identified individual

macroblocks from the global motion estimation parameters are derived independently of types of

local motion vectors or global motion vectors used for other adjacent macroblocks in the

encoded image frames, see column 10, lines 14-67), using the derived local motion vectors to

identify reference blocks in a current reference frame, and then using the reference blocks to

reconstruct the identified macroblocks in a current frame (see column 3, lines 21-28, column 10,

lines 14-67), using the local motion vectors to identify different reference subblocks in the

current reference frame and then using the identified reference subblocks to reconstruct the

subblocks in the current frame (see column 1, lines 40-49, column 3, lines 21-28, column 5, lines

13-27, column 10, lines 14-67).

Suzuki does not particularly disclose, though a decoder comprising a processor for

receiving encoded image frames and the associated decoding processings, and wherein the

processor uses the global motion estimation parameters to generate local motion vectors for

different subblocks, as claimed in claims 10 and 15. It is to be noted that it is considered

obvious to produce a complementary decoder and all the decoder specific functions to an already

known encoder with the encoding specific functions. With this in mind, it is therefore

considered obvious to provide the complementary decoder with the specific decoding functions

such as processor for receiving encoded image frames and the generation of local motion vectors

using global motion estimation parameters for the different subblocks as claimed in view of the

already known encoder as shown in Figures 4 and 6 of Suzuki with specific complementary

encoding functions. Therefore, it would have been obvious to one of ordinary skill in the art,

having the Suzuki reference in front of him/her and the general knowledge of encoders and

decoders, would have had no difficulty having known the encoder as shown in Figures 4 and 6 of

Suzuki to provide the complementary decoder with the specific decoding functions as claimed

for the same well known decoding of video data for viewing purposes as claimed.

13.   Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki as

applied to claims 10 and 15 in the above paragraph (12), and further in view of Suzuki et al of

record (6,205,178).

Suzuki discloses substantially the same method for coding or decoding an image, and

encoder as above, further including indicating when the macroblocks are a direct copy of the

reference blocks (i.e., in the INTRA frame coding mode, identified reference blocks are directly

copied into the macroblocks, see 3-1, 3-2, 3-3 of Figure 4, column 5, lines 13-55) and indicating

when residuals are added to the reference blocks to reconstruct the macroblocks (i.e., in the

INTER or INTER4V mode, interframe coding provides the adding of encoded residuals to the

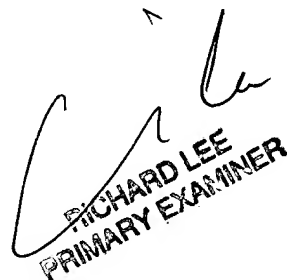identified reference blocks, see 3-1, 3-2, 3-3, column 5, lines 13-55).

Suzuki does not particularly disclose, though, the followings wherein the processor

within a decoder detects code words included along with the encoded image frames that identify

global motion vector coded macroblocks that do not have associated local motion vectors in the

encode image frames, wherein the code words indicate when the macroblocks are a direct copy

of the reference blocks, and wherein the code words indicate when residuals are added to the

reference blocks to reconstruct the macroblocks as claimed in claims 12-14. However, Suzuki et

al discloses a video coder as shown in Figures 6, 7A, and 7B, and teaches the conventional use of

codewords generated to identify macroblocks that derive the global motion parameter and local

motion estimation parameter processings (see Figures 7A and 7B). In addition, since the

codewords as generated from the encoder is already known, it is considered obvious that the

complementary decoder as provided by one skilled in the art would certainly have the capability

to detect the code words, wherein the code words indicate when the macroblocks are a direct

copy of the reference blocks, and wherein the code words indicate when residuals are added to

the reference blocks to reconstruct the macroblocks as claimed. Therefore, it would have been

obvious to one of ordinary skill in the art, having the Suzuki and Suzuki et al references in front

of him/her and the general knowledge of codeword data within MPEG headers, would have had

no difficulty in providing the codewords for identifying the macroblocks that derive the global

motion parameter as taught by Suzuki et al for the encoder of Figure 4 of Suzuki as well as the

complementary decoder with the capability to detect the code words wherein the code words

indicate when the macroblocks are a direct copy of the reference blocks, and wherein the code

words indicate when residuals are added to the reference blocks to reconstruct the macroblocks

for Suzuki in view of the already known encoder header data of Suzuki et al for the same well

known compliance to the MPEG encoding and decoding processing of macroblocks with the use

of header data purposes as claimed.

14.   Claims 1, 2, 4-6, 8, and 9 are allowed.

15.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Richard Lee whose telephone number is (571) 272-7333. The
Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with
alternate Fridays off.

RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

9/9/05